

What is claimed is:

1. A method for monitoring a network state comprising the steps of:

assigning a destination and a monitor period to a module for monitoring a

5 state of a network installed in a source area;

generating a specific packet for measuring a bandwidth and a degree of  
congestion of the network;

transmitting the specific packet through a network layer to a designated  
destination;

10 returning the packet received by the destination to the source area;

analyzing a message transmitted from the destination and measuring a bandwidth  
and a degree of congestion of the network; and

repeatedly performing the step of generating the packet and the following  
steps in every assigned monitor period during a predetermined time, thereby  
15 recognizing a network state.

2. The method according to claim 1, wherein in case that an error

occurs during the transmission of the specific packet through the network layer to  
a designated destination, comprising the steps of:

20 detecting an error signal in the network operating system;

transmitting an error message to the source area; and

analyzing the received error message to measure a bandwidth and a  
degree of congestion of the network, thereby recognizing a network state.

25 3. The method according to claim 1, wherein the bandwidth of the

network is computed by dividing the size of the packet by the difference between the time at which the packet is transmitted from the source area and the time at which the message transmitted from the destination is received by the source area.

5           4.       The method according to claim 1, wherein the degree of congestion of the network is computed by measuring a bandwidth and a packet loss amount or judging over whether an error has occurred.

10           5.       The method according to claim 1, wherein in case that a destination is changed, the step for assigning a destination and a monitor period and the following steps are sequentially performed again.

15           6.       An apparatus for monitoring a network state which includes a source area system having a module for transmitting a specific packet through a destination connected to a network and the network to the destination system, analyzing a packet transmitted from the destination, and measuring a bandwidth and a degree of congestion of the network, to thereby recognize a network state.

20           7.       The apparatus according to claim 6, wherein the module for recognizing a network state is installed at one side of either the destination or the source area.